Algebra 1 Proficiency Level Descriptors

Minimal

Students performing at the minimal level are beginning to apply their algebra mathematics skills. They are learning how to represent and compute with most rational and some irrational numbers. They have limited ability to manipulate or solve linear equations Students simplify monomials and some polynomials, but have difficulty with factoring. They inaccurately model representations of linear equations using tables, graphs, or equations. Students may attempt to solve or graph systems of linear equations. Students have difficulty solving quadratic equations. They identify some traits of slope, and begin to understand it as a rate of change. Students summarize two-variable data sets and are developing an understanding of correlation. They estimate lines of best fit with drawings, but cannot write corresponding equations.

Partial

Students performing at the partial level inconsistently apply their algebra mathematics skills. They represent, define, classify, compute, and estimate most rational and some irrational numbers. They manipulate and solve linear equations and inequalities. Students simplify and may be able to factor monomials, most polynomials, and some quadratic expressions. They model representations of linear equations and some inequalities using tables, graphs, or equations but may not be able to solve, graph, or interpret systems of linear equations or inequalities. They solve basic quadratic equations by factoring or by taking square roots. Students recognize slope as a rate of change but inconsistently determine the slopes of lines. Students summarize, display, and recognize the correlation of two-variable data sets. They estimate lines of best fit, and attempt to interpret and test conjectures.

Algebra 1 Proficiency Level Descriptors

Sufficient

Students performing at the sufficient level apply algebra mathematics skills appropriately. They use multiple representations to define, classify, compute, and estimate with rational and irrational numbers. Students manipulate, solve, and extract pertinent information from linear equations and inequalities. They explain the four operations with rational and irrational numbers, and determine reasonableness of results. Students simplify and factor monomials, polynomials, and quadratic expressions. They analyze, connect, and model multiple representations of linear equations and inequalities using tables, graphs, and equations. Students solve, graph, analyze, and interpret systems of linear equations and inequalities with and without technology. They solve quadratic equations by factoring or by taking square roots. They identify, determine, analyze, and apply slope as rate of change. They summarize, display, and analyze the relationship or correlation of two-variable data sets. They determine and estimate lines of best fit and write equations to interpret and test conjectures.

Substantial

Students performing at the substantial level consistently apply algebra mathematics skills appropriately. They fluently represent, classify, compute, and estimate rational and irrational numbers. They effectively manipulate, solve and extract pertinent information from linear equations and inequalities. Students simplify and factor completely monomials, polynomials, and quadratic expressions. They efficiently analyze, connect, and model multiple representations of linear equations and inequalities using tables, graphs, and equations. Students consistently solve, graph, analyze, and interpret systems of linear equations and inequalities with and without technology without difficulty. Students solve quadratic equations using factoring and write quadratic equations when given the solutions. They skillfully analyze and apply slope as rate of change. Students summarize, display, and analyze the relationship and correlation of two-variable data sets and make reasonable predictions. They estimate and write equations for lines of best fit to interpret and test conjectures.